

REMARKS**I. Status of the Claims:**

Claims 1-6 and 8, 9 and 11 are currently pending.

II. Rejection under 35 U.S.C. §§ 102 and 103:

Claims 1-3, 5-6, 9 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kohashi et al. (U.S. Patent No. 6,642,960) in further view of Shiomi (JP 2001016509A). Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kohashi et al. (U.S. Patent No. 6,642,960) in further view of Examiner's Official Notice in further view of Shiomi (JP 2001016509A). For the Examiner's reference, it is respectfully noted that Shiomi (JP 2001016509A) corresponds to U.S. Patent No. 6,707,955, which provides a clearer English translation than the patent office translation provided with the Office Action.

Claims 1, 6 and 8 are directed to arrangements involving creating one-dimensional correction data in horizontal direction by performing computation using signals which are acquired by image sensing in an unexposed state and smaller in number than said plurality of pixel, and correcting image data of said plurality of pixels for image data of each array of pixels arrayed in horizontal direction, acquired by image sensing in an exposed state, by using the one-dimensional correction data in horizontal direction.

That is, the claimed arrangements correct image data for each image data in a horizontal direction (i.e., the image data acquired by image sensing in an exposed state) by using the one-dimensional correction data in horizontal direction, created based on signals acquired by image sensing in an unexposed state.

On the contrary, Kohashi simply discloses an approach to identify defective pixels and compensate for such defective or faulty pixels. Kohashi is silent as to creating one-dimensional correction data in the horizontal direction based on the signal acquired by image sensing in an unexposed state. Kohashi also is silent as to correction of image data of the plurality of pixels acquired by image sensing in an exposed state using the one-dimensional correction data in the horizontal direction. The Examiner alleges that these deficiencies are remedied by Shiomi. The Applicant respectfully disagrees.

Shiomi is directed to an image sensing device which improves upon correction techniques to address the problem of "white shading" resulting from pixel positions of the image sensing element. Shiomi presents an approach to address the specific problem of different sensitivities in different areas of a frame, e.g., non-uniformity, when correcting for white shading using linear correction sequences, e.g., $H(i)$ and $V(j)$ at each pixel point. Specifically, Shiomi proposes a system which is able to selectively employ different correction sequences of $H(x)$ or $V(y)$ for different areas or regions. It is however unclear why or even how one of ordinary skill in the art would combine the teachings of these two references which address different types of problems, i.e., compensation of defective picture elements in Kohashi as compared to white shading in Shiomi. The Office Action does not provide adequate reasons as to why or how one of ordinary skill in the art would combine the teachings of one-dimensional correction data for correcting white shading as taught in Shiomi with interpolating and compensating defective pixels as taught in Kohashi. As a consequence, the combination of the cited references would still not render obvious creating one-dimensional correction data in the horizontal direction based on the signal acquired by image sensing in an unexposed state or correction of image data of the

plurality of pixels acquired by image sensing in an exposed state using the one-dimensional correction data in the horizontal direction

Further, the Office Action on page 4 sets forth a motivational basis for combining the reference, which is reproduced below:

Therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of SHIOMI with the teachings of Kohashi et al. because in paragraph 0043 SHIOMI teaches that the use of the invention reduces noise.

The portion of SHIOMI relied upon by the Examiner, i.e., paragraph 0043 of the patent office translation, relates to “reset noise” which is addressed by the CDS/AGC circuit 6 and does not relate to the horizontal or vertical correction which the Examiner is relying upon to address the deficiencies of the Kohashi teachings. A clearer English translation of SHIOMI (JP 2001016509A) of this portion is set forth on column 6, lines 40-52 of the corresponding U.S. Patent No. 6,707,955, which is reproduced below:

Charges accumulated by the image sensing element 5 within a predetermined period of time are read in turn in units of pixels, and are supplied to a CDS/AGC circuit 6. *The circuit 6 reduces noise components such as reset noise and the like produced by the image sensing element itself*, amplifies the charge signal to an appropriate level, and supplies the signal to an A/D converter 7. The A/D converter 7 converts object luminance information corresponding to the charge amount into digital data. Since optical color filters for generating, e.g., R, G, and B color signals or the like are adhered onto the image sensing element 5, the output signals from the image sensing element 5 alternately represent the respective colors. (emphasis added)

Therefore, the Office Action does not provide a proper rationale for combining the cited references. In view of the foregoing, claims 1, 6 and 8 and their dependent claims are not rendered obvious by the cited references, individually or in combination.

CONCLUSION

Based on the foregoing remarks, the Applicant respectfully requests reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4500, Order No. 1232-5309.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 1232-5309.

Respectfully submitted,
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